

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 1-16 are pending in this application. Claims 1, 3-8, and 10-12 were rejected under 35 U.S.C. §102(e) as anticipated by U.S. patent 6,005,600 to Hill. Claim 2 was rejected under 35 U.S.C. §103(a) as unpatentable over Hill in view of U.S. patent 6,845,398 to Galensky et al. (herein "Galensky"). Claim 9 was rejected under 35 U.S.C. §103(a) as unpatentable over Hill in view of U.S. patent 6,507,672 to Watkins et al. (herein "Watkins"). Claims 13-16 were rejected under 35 U.S.C. §103(a) as unpatentable over Hill.

Applicant and applicant's representative thank Examiner Van Handel and Supervisory Patent Examiner Kelley for the interview granted applicant's representative on August 28, 2006 for the present application. During the interview the outstanding rejections were discussed in detail. Further, during the interview claim amendments were discussed that clarify certain claim features. The present response submits the discussed claim amendments. During the interview the Examiners indicated such amended claims appear to distinguish over the applied art.

Addressing the above-noted rejections, those rejections are traversed by the present response.

Each independent claim is amended by the present response to clarify features recited therein. Specifically, independent claim 1 now further recites the control section "controlling an operation mode to be one of a normal speed mode, a high speed mode higher than the normal speed mode, or a pause mode". Independent claim 1 also clarifies that the range of forward and backward screens with reference to a noticed screen being requested is "based on whether the operation mode is the normal speed mode, the high speed mode, or the pause mode". The other independent claims are amended to recite similar features.

The independent claims are also amended by the present response to further recite:

wherein the predetermined range is a first number of screens and image data at intervals within a first time period when the operation mode is the normal speed mode, the predetermined range is a second number of screens and image data at intervals of a second time period greater than the first time period when the operation mode is the high speed mode, and the predetermined range is a third number of screens, greater than the first and second number of screens, and image data at intervals of a third time period when the operation mode is the pause mode.

That subject matter is believed to be clear from the original specification for example in Figures 5A-5C and the corresponding description in the present specification.

In the claimed features, and with reference to Figure 2 in the present specification as a non-limiting example, a digital television monitor 32 includes a buffer 56 and a control circuit 54. The digital television monitor 32 receives image data from a recording device 31. According to the claimed features, the buffer 56 stores screens or frames of image data from the recorder 31. One benefit realized by the operation in the claimed invention is that real-time playback can be enhanced by utilizing such a buffer 56. To realize that operation, in the claimed invention the control circuit 54 requests a specific amount of data to be sent from the recorder 31 based on an operation mode of the digital television monitor 32. For example, in a normal speed playback mode the control circuit 54 requests that 15 frames forwardly and backwardly adjacent to a noticed frame and other frames within two minutes be sent from the recorder 31, in a high speed mode certain frames for 5 minutes of forward and backward data from a noticed frame are requested to be sent, and in a pause mode 30 successive frames forwardly and backwardly from a noticed frame and other frames within two minutes are requested to be sent. The above-noted subject matter is discussed in the specification at page 30, line 5 to page 32, line 1.

Thereby, in the claimed invention the predetermined range of forward and backward screens from a noticed screen requested to be sent to the control section 54 varies and is set based on whether the image processing apparatus is in a normal speed mode, a high speed

mode, or a pause mode. The claimed features are believed to clearly distinguish over the applied art.

Hill is cited in the Office Action to disclose a control section 114 that issues a request for image data of screens with a predetermined forward and backward range.

Hill discloses monitoring a buffer fill level as a way to control a number of requested frames.¹ In that way, Hill differs from the claims as currently written. In the claims as currently written the number of screens requested by the control section is not based on the fill level of the buffer 56, but instead is based on whether the operation mode is the normal speed mode, the high speed mode, or the pause mode. In the non-limiting example discussed above a different number of screens is requested to be issued based on the operation mode, which is neither taught nor suggested by Hill, which bases such a request only on a fill level of a buffer.

Hill differs from the claims as written in which the actual number of screens in the predetermined range forward and backward with reference to a notice screen will differ in a normal speed mode, a high speed mode higher than the normal speed mode, or a pause mode. Hill does not change the actual number of frames provided.

In Figures 5A-5D Hill discloses moving a request threshold between a normal speed operation and a high speed operation. However, Hill appears to disclose that in the high speed operation the frames are displayed so that only every other frame is shown. For example in Figure 5B in Hill, in a high speed operation every other frame is shown. Thereby, the number of frames actually provided to a buffer is the same in a normal speed mode as in Figure 5A compared with a higher speed mode in Figure 5B. Hill makes that explicit disclosure in stating that in the operation in Figure 5B the threshold is moved twice as far into the future at the double speed, but “this alteration does not require that the buffer manager

¹ See for example Hill at column 8, line 58 *et seq.*

118 operate faster or store more information; it only requires that the frames be fetched in a different order".² From that disclosure it appears clear that in Hill the actual number of frames forward and backward from a noticed screen is not changed based on different speed modes.

Thereby, the claims as written are believed to distinguish over the applied art.

The claims also further recite:

wherein the predetermined range is a first number of screens and image data at intervals within a first time period when the operation mode is the normal speed mode, the predetermined range is a second number of screens and image data at intervals of a second time period greater than the first time period when the operation mode is the high speed mode, and the predetermined range is a third number of screens, greater than the first and second number of screens, and image data at intervals of a third time period when the operation mode is the pause mode.

As shown for example in Figures 5A-5C in the present specification, in a normal playback mode 15 forward and backward screens plus screens at intervals of 0.5 seconds within 2 minutes are requested. As shown in Figure 5B in a high speed mode 15 frames forward and backward from a referenced screen and image data at intervals of 0.5 seconds within 5 minutes are requested. As shown in Figure 5C in a pause mode 30 frames forward and backward of a referenced screen plus image data at intervals of 0.5 seconds within 2 minutes are requested. Such features further clarified in the claims clearly are neither taught nor suggested by Hill. Thus, the claims even further distinguish over the applied art.

In such ways, the claims as currently written are believed to distinguish over Hill.

In maintaining the outstanding rejection the Office Action states:

Hill discloses a buffer manager 118 with a request threshold that represents the optimum number of frames stored in the buffer at any give time (col. 6, l. 63-65). The buffer manager 118 compares the fill level of the buffer with this request threshold to determine when to request new frames and how

² Hill at column 8, lines 12-17.

many new frames to request (col. 7, l. 11-18). When the user changes to a different rate of play, the range of the request threshold is altered accordingly (for double speed, the request threshold moves twice as far into the future) (col. 8, l. 10-13). Thus, Hill effectively meets the limitation “the predetermined range being set based on an operation mode being one of a normal speed mode, a high speed mode higher than a normal speed mode, or a pause mode.”

NOTE: The USPTO considers the applicant’s “one of” language to be anticipated by any reference containing any of the subsequent corresponding elements.

Hill has a different operation than the claimed invention with respect to the data stored in the buffer, as discussed above.

In the claimed invention whether the device is operating in a normal speed mode, high speed mode, or pause mode will control the number of screens provided. As discussed above, Hill clearly does not disclose that feature.

Further, the teachings in the further cited references to Galensky and Watkins are not believed to cure the above-discussed deficiencies in Hill.

In view of these foregoing comments, the claims as currently written are believed to distinguish over the applied art.

In view of these foregoing comments applicant respectfully submits the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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